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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 15558.4-2023

Replacing GB/T 15558.3-2008

**Buried polyethylene(PE) piping systems for the supply of
gaseous fuels - Part 4: Valves**

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Standardization Administration**

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Foreword

This document complies with the provisions of GB/T 1:1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents"

Drafting:

This document is Part 4 of GB/T 15558 "Underground polyethylene (PE) piping system for gas use": GB/T 15558 has been released

The following parts:

---Part 1: General provisions;

---Part 2: Pipes;

---Part 3: Pipe fittings;

---Part 4: Valves;

---Part 5: System suitability:

This document replaces GB/T 15558:3-2008 "Buried polyethylene (PE) piping system for gas use - Part 3: Valves" and is consistent with

Compared with GB/T 15558:3-2008, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) The maximum working pressure is increased by no more than 1.0MPa (see Chapter 1);
- b) The nominal outer diameter range has been changed (see Chapter 1, Chapter 1 of GB/T 15558.3-2008);
- c) Changes in terms and definitions (see Chapter 3, Chapter 3 of GB/T 15558.3-2008);
- d) The requirements for recycled materials/recycled materials in polyethylene compounding have been changed (see 4.1:3, 4.2:1 of GB/T 15558.3-2008);
- e) The requirements for metal materials have been changed (see 4.2:2, 4.1 of GB/T 15558.3-2008);
- f) Changed the requirements for elastic seals (see 4.2:3, 4.3 of GB/T 15558.3-2008);
- g) Changed lubricant requirements (see 4.2:4, 4.4 of GB/T 15558.3-2008);
- h) Added requirements for recycled materials/recycled materials for non-polyethylene parts (see 4.2:5);
- i) The weldability requirement is deleted (see 4.5 of GB/T 15558.3-2008);
- j) Added requirements for pre-installed components (see 4.2:6);
- k) Added product classification (see Chapter 5);
- l) Changed the valve color requirements (see 6:2, 5:1 of GB/T 15558.3-2008);
- m) The general requirements for valve design have been changed (see 6:3:1, 5:2 of GB/T 15558.3-2008);
- n) Added valve body port design requirements (see 6:3:3);
- o) Added appearance requirements for factory prefabricated joints (see 6:3:6);
- p) Added relevant requirements for brackets to prevent the socket from being out of round (see 6:4:1);
- q) The relevant dimensional requirements for the square hole key of the operating cap have been changed (see 6:4:4);
- r) Changed the parameters of low-pressure seal test, pressure drop, operating torque, and stopping strength (see 6:5, GB/T 15558.3-2008 7:2);
- s) Added bending resistance ($d_n > 63\text{mm}$) and valve testing requirements when $d_n > 125\text{mm}$ (see 6:5, GB/T 15558.3-7:2 of:2008);
- t) Added requirements for torsional strength and strain hardening test (SHT) of hoisting devices (see 6:5);

- u) Added ash content, carbon black content, carbon black dispersion/pigment dispersion, and changed the requirements for oxidation induction time (see 6:6, GB/T 15558:3-Chapter 8 of:2008);
- v) Added gas flow and system applicability requirements (see 6:7 and 6:8);
- w) Added condition adjustment time and test standard environment, appearance and color, opening and closing device torsional strength, strain hardening test, ash content Test method requirements; changed the requirements for dimensional measurement and hydrostatic pressure testing (see Chapter 7, Chapter 9 of GB/T 15558:3-2008);
- x) The batch group requirements have been changed (see 8:2:1, 10:4:1 of GB/T 15558:3-2008);
- y) Added the list of inspection items (see 8:4:1);
- z) The requirements for final inspection and type inspection have been changed (see 8:3 and 8:5, 10:2 and 10:3 of GB/T 15558:3-2008);
- aa) Added labeling requirements for internal fluid and compound brands (see 9:2);
- ab) Changes in technical documentation requirements (see Chapter 10, 12:4 of GB/T 15558:3-2008);
- ac) Changes in packaging, transportation and storage requirements (see Chapter 11, Chapter 12 of GB/T 15558:3-2008);
- ad) Changed the test method of sealing test (inner seal and outer seal) (see Appendix C, 9:5 of GB/T 15558:3-2008);
- ae) Changed the sealing performance of the opening and closing device after bearing bending load (see Appendix I, Appendix D of GB/T 15558:3-2008):

This document is modified to adopt ISO 4437-4:2022 "Plastic piping systems for gas use polyethylene (PE) Part 4: Valves":

Compared with ISO 4437-4:2022, this document has many structural adjustments:
Comparison list of structure number changes between two files

See Appendix A for the table:

Compared with ISO 4437-4:2022, there are many technical differences between this document and the clauses involved in the outer margin of the page:

Single lines (I) are marked: A list of these technical differences and their causes is shown in Appendix B:

The following editorial changes have been made to this document:

---In order to coordinate with the existing standards, the name of the standard is changed to "Buried polyethylene (PE) pipeline system for gas use Part 4: Valves";

---In order to facilitate the understanding and use of the standard, notes that are not in line with my country's national conditions have been deleted, and some notes have been changed or added:

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

Introduction

GB/T 15558 "Buried Polyethylene (PE) Pipeline System for Gas" is to standardize the materials of buried polyethylene (PE) pipeline system for gas:

Materials, pipes, fittings, valves and system suitability requirements: During this revision process, GB/T 15558:1-2023 and

Replaced GB/T 15558:1-2015, GB/T 15558:2-2005 and GB/T 15558:3-2008 respectively:

GB/T 15558 "Buried Polyethylene (PE) Pipeline System for Gas" was drafted based on the actual production and application of polyethylene pipeline products in my country:

It consists of five parts: general principles, pipes, fittings, valves and system applicability:

---Part 1: General principles: The purpose is to establish the terms, definitions, symbols and regulations applicable to buried polyethylene (PE) piping systems for gas:

Abbreviations, materials, test methods and inspection report requirements:

---Part 2: Pipes: The purpose is to establish terms, definitions, symbols and abbreviations applicable to buried polyethylene (PE) pipes for gas

language, materials, product classification, requirements, test methods, inspection rules, marking and packaging, transportation and storage:

---Part 3: Pipe fittings: The purpose is to establish terms, definitions, symbols and abbreviations applicable to buried polyethylene (PE) pipe fittings for gas

language, materials, product classification, requirements, test methods, inspection rules, markings, technical documents and packaging, transportation and storage:

---Part 4: Valves: The purpose is to establish terms, definitions, symbols and abbreviations applicable to buried polyethylene (PE) valves for gas use:

language, materials, product classification, requirements, test methods, inspection rules, markings, technical documents and packaging, transportation and storage:

---Part 5: System suitability: The purpose is to establish the system suitability for buried polyethylene (PE) piping systems for gas